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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
 )  
An Allocation of Spectrum for the ) RM- 9267  
Private Mobile Radio Services )

COMMENTS OF ITRON, INC.

On April 22, 1998, the Land Mobile Communications Council ("LMCC") submitted a Petition for Rulemaking (the "Petition") in which it, among other things, requested that the Commission allocate additional spectrum for the private mobile radio service ("PMRS"). Itron, Inc. ("Itron"), believes that, whatever action the FCC takes with respect to LMCC's Petition, the Commission should take into account the special considerations that pertain to the 1427-1432 MHz band.

I. BACKGROUND AND STATEMENT OF INTEREST.

Itron develops, manufactures, and markets utility meter-reading systems. These systems combine a wireless communications device and a unique communications protocol to enable electric, gas, and water utilities and others to read both commercial and residential meters on a reliable, low-cost basis. Itron's second generation systems also support two-way communications linking utilities to customer premises utility meters, making possible services such as utility load management and the provision of real-time price and consumption data to customers. Itron's systems operate in various frequency bands, including the 1427-1432 MHz band that is a subject of LMCC's Petition.

Wireless meter-reading systems, such as those developed and marketed by Itron, represent a significant advance over conventional methods for providing an interface between utilities and utility meters. They dramatically enhance utility productivity, making it possible for a meter reader to increase by a factor of ten, twenty, or even more the number of meters that can be read in an eight-hour shift. In addition, they obviate the need for estimated bills and multiple trips to customer homes. Moreover, two-way systems enable utilities to offer their customers a variety of strategies to reduce peak demand and shift usage to off-peak hours, as well as encouraging conservation by providing customers with detailed information regarding their cost and level of energy

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use. These benefits reduce energy costs and promote responsible environmental management directly, and also make it possible for utilities to defer or avoid altogether the need to construct new generating capacity.

The efficiencies generated by automated meter-reading systems have become increasingly important — and demand for these systems will rise — as the utility industry is deregulated and access to competing utility service providers spreads.

The LMCC Petition recognizes the benefits provided by private utility meter-reading systems. In addressing the inadequacy of current spectrum allocations, LMCC discusses the plight of Public Service Electric & Gas Company ("PSE&G"), which — due to the lack of available MAS and telemetry spectrum used for meter reading and remote control purposes — must use public carrier services.<sup>1</sup> According to LMCC, the need for PSE&G to use public carrier systems increases the utility's operating costs by roughly \$1.2 million per year and forces it to accept service that is less reliable, particularly during emergencies (such as bad weather, traffic jams and traffic accidents) when cellular use increases.<sup>2</sup>

In order to address the shortfall of PMRS spectrum, the LMCC Petition proposes, among other things, that the 1427-1432 MHz band be made available for use by the PMRS service.<sup>3</sup> Itron's and its customers' use of this band gives Itron a direct interest in this aspect of LMCC's Petition. In addition, Itron's experience with the 1427-1432 MHz band makes it uniquely qualified to comment on the characteristics of this band, which, as LMCC recognizes, make its use by the broader PMRS community at best problematic and at worst unworkable.

## **II. THE COMMISSION SHOULD GIVE CAREFUL CONSIDERATION TO LMCC'S EFFORT TO OBTAIN ADDITIONAL PMRS SPECTRUM.**

Itron agrees with LMCC that utilities and others who rely on private mobile systems in many cases have needs that are inadequately met — or completely unmet — by commercial carriers.<sup>4</sup> Moreover, Itron agrees that PMRS users may require additional spectrum to meet their needs in the coming decades. For these reasons, Itron

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<sup>1</sup> LMCC Petition at ¶ 18.

<sup>2</sup> Id.

<sup>3</sup> Id. at ¶ 67.

<sup>4</sup> See, e.g., id. at ¶¶ 53-54.

joins LMCC in requesting that the Commission examine the adequacy of existing PMRS allocations and the opportunities for augmenting these allocations to satisfy future needs.

**III. IN LIGHT OF THE 1427-1432 MHZ BAND'S UNIQUE SHARING CONSTRAINTS, THE COMMISSION SHOULD MAKE THIS SPECTRUM AVAILABLE SOLELY FOR USE BY UTILITY METER-READING SYSTEMS.**

The 1427-1432 MHz band is allocated on a secondary basis for fixed telemetering and land mobile telemetering and telecommand operations. It lies adjacent to a radio astronomy band and is shared with Federal government users. While the 1427-1432 MHz band is scheduled for reallocation to the private sector in 1999, Federal operations at 14 sites will continue to be protected for nine years after the transfer date. The need to protect radio astronomy will continue indefinitely.

As LMCC recognized in its Petition, these sharing constraints limit the 1427-1432 MHz band's usefulness for most PMRS services.<sup>5</sup> Many of the Federal government sites that will continue to be protected after the reallocation date are in key urban areas. LMCC concludes, therefore, that the need to operate on a non-interference basis with these sites "would substantially limit any potential PMRS deployments in those areas."<sup>6</sup> Indeed, the Commission has recognized that "continued Government operations limit or may even eliminate coverage of most major metropolitan areas until the year 2004."<sup>7</sup>

Other factors also limit the attractiveness of the 1427-1432 MHz band. Its relatively high frequency adversely affects the availability and cost of equipment, potentially increasing system costs by a factor of four to ten.<sup>8</sup> Moreover, as LMCC acknowledges, it is difficult to design a workable channelization plan for the band, and even LMCC admits that the channelization proposal offered in the Petition would create "additional complexity [that] will further negatively impact manufacturers' ability to respond to potential licensee needs."<sup>9</sup>

The difficulty of using the 1427-1432 MHz band for conventional PMRS has prompted LMCC to make an alternative recommendation that the band be reallocated

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<sup>5</sup> Id. at ¶ 74.

<sup>6</sup> Id.

<sup>7</sup> Plan for Reallocated Spectrum, FCC 96-125 at ¶ 28 (March 22, 1996).

<sup>8</sup> Id. at ¶¶ 76-77.

<sup>9</sup> Id. at ¶ 77.

to the amateur service to offset the adverse effect on that service of LMCC's proposed reallocation of the 420-430/440-450 MHz bands.<sup>10</sup> Itron opposes this recommendation.

Although the 1427-1432 MHz band is not suitable for general PMRS use, it is tailor-made for utility meter reading. Itron's systems are characterized by low power, a limited duty cycle, and other spectrum efficiencies that enable them to co-exist in the band with Federal government and radio astronomy operations. Itron has been licensed to operate in a portion of the 1427-1432 MHz band for several years and its systems have proven their ability to operate harmoniously with both Federal government and radio astronomy users.

This experience demonstrates that utility meter-reading systems can overcome the 1427-1432 MHz band's relatively inhospitable sharing environment. Moreover, Itron's use of the band demonstrates that, with respect to this particular application, the band's relatively high frequency does not create problems in terms of equipment cost or availability. Nor has channelization been an issue.

Accordingly, designating the 1427-1432 MHz band for use by utility meter-reading systems upon its reallocation from the Federal government represents the most appropriate use for this band.

Respectfully submitted,

ITRON, INC.

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June 1, 1998

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<sup>10</sup> Id. at ¶ 78.